Attachment A- Questions for Public Comment

Existing and Potential Biopower Resources

1. Executive Order S-06-06 calls for 20 percent of RPS energy to come from biopower in the years 2010 and 2020. It also calls for 20, 40, and 75 percent of transportation fuels to be produced from in-state biomass in 2010, 2020 and 2050, respectively. Can these goals be met with in-state biomass feedstock? If not, what are some options for biomass crops or out-of-state biopower?

Biogas

2. Do nitrogen oxide (NOx) emission requirements pose a hurdle to development of new biogas generation? What low-NOx technologies are available and how much do they cost? What can be done to expand the availability and utilization of low-NOx technologies for generating electricity from biogas?

3. Is electricity generation from landfill gas a technology that still has potential to grow or have many of the best landfill sites been developed already?

4. There has been a downward trend in the amount of energy generated from biomass and biogas in the last 5 years. What could be the reason behind this? What can be done to reverse this trend?

5. Capturing methane from dairies and wastewater treatment facilities can help reduce greenhouse gas emissions in California. Assembly Bill 1969 (Yee, Chapter 731, Statutes of 2006) established a feed-in tariff set at the market price referent for public and wastewater treatment facilities; however, no facilities have signed up for this feed-in tariff. Is the feed-in tariff level set too low? Are there other barriers preventing development of new biogas facilities?

6. Has there been resistance to the injection of biogas into natural gas pipelines in California? Has injection of biogas into natural gas pipelines been successful in other states or countries? What changes (e.g., improvements in technology, technological breakthroughs, or expanded use to bring down manufacturing costs) are needed to expand the use of biogas in the natural gas transmission system?

Competition for solid-fuel biomass feedstocks

7. As Assembly Bill 118 (Núñez, Chapter 750, Statutes of 2007) and other alternative transportation goals and programs are implemented, the transportation sector may use an increased amount of biomass for production of transportation fuel. From an electricity production perspective, what can be done to mitigate the competition for fuel between the transportation and electricity sectors? Specifically, what can be done to provide a steady and affordable stream of solid biomass fuel for the

electricity generation? Should refuse-derived fuels (densified or pelletized) be given further consideration as a biomass feedstock? What technologies may be required to produce a “clean” fuel?

8. There are uses for biomass other than generating energy. These uses include: compost and landscape mulch, animal bedding for chickens, animal feed, and daily landfill cover. What impact will these activities have on the availability and cost of solid-fuel biomass feedstock for the electricity sector?

Co-firing biomass in coal power plants

9. What barriers are there to co-firing biomass in coal plants in the Western Electric Coordinating Council region?

10. What kinds of infrastructure upgrades are needed for co-firing?

11. What percentage of solid-fuel biomass can be technically and economically co-fired with coal?

12. Are there sufficient out-of-state coal plants located near solid-fuel biomass feedstock to contribute significantly to achieving 20 percent of the state’s renewable energy goals with biomass and biogas?

13. What policies would need to be in place to make co-firing biomass an attractive option? If a cap-and-trade program for greenhouse gas emissions is established, would co-firing biomass in coal plants become an economically feasible approach to reducing greenhouse gas emissions? Under what conditions?

Other barriers to development of new solid-fuel biomass generation

14. What are the major barriers to creating a self-sustaining biomass industry in California? Which of these barriers can be addressed through better industry practices, changes in regulations, or other measures?

15. What regulatory requirements make it difficult for new biomass plants to become operational? What changes would you suggest to meet the intent of these regulations and allow new biomass plants to come on-line?

16. Assembly Bill 3048 (Committee on Utilities and Commerce, Statutes of 2008, Chapter 558) removed fuel restrictions for existing solid fuel biomass facilities participating in the Existing Renewable Facilities Program. Existing biomass facilities are now under the direct guidelines of the RPS statute requiring that technology used for the RPS “not cause or contribute to any violation of a California environmental quality standard or requirement.” Because state harvesting requirements are not applicable on federal land, the removal of these restrictions may have made it easier for these facilities to purchase fuel harvested from federal forests. What effect, if any, has this change had on the availability and cost of solid fuel biomass? If collection

and transportation costs remain a barrier, what technologies, processes, or incentives could help improve the economics and make environmentally sound use of this material practical?

17. Staff has proposed various solutions to overcome many of the barriers to meeting a goal of 20 percent of the state's RPS with biomass generation. For solid-fuel biomass, these solutions include: 1) torrification/pelletization of biomass fuel; 2) using burn piles from forest thinning projects; and 3) diverting green material, construction and building deconstruction lumber scrap from landfills; and 4) using refuse-derived fuel. Which of these solutions are likely to be available to help meet the 2010 and 2020 goals? Will these solutions be enough to meet the potential need? What other solutions should be considered?